UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

279540

April 12, 2004

USCG-2004-16860-25

Commander Mark A. Prescott
Department of Homeland Security
U.S. Coast Guard, Commandant (G-MSO-2)
Vessels and Facilities Operating Standards Division
2100 Second Street, SW
Washington, D.C. 20593-0001

Dear Commander Prescott:

The National Marine Fisheries Service (NOAA Fisheries) has received the Notice of Intent (NOI) to prepare an environmental impact statement (EIS) and request for public comment for the Gulf Landing LLC Deepwater Port license application (69 FR 9348; USCG-2004-16860) dated March 8, 2004. The NOI indicates that the U.S. Coast Guard (USCG) and the Maritime Administration (MARAD) intend to prepare an EIS for the construction of a liquefied natural gas (LNG) deepwater port in Outer Continental Shelf, West Cameron Block 213, approximately 38 miles south of Cameron, Louisiana. The project also includes the construction of 66 miles of 16- to 36-inch pipelines that would direct natural gas from storage tanks at the deepwater terminal to existing gas supply systems in the Gulf of Mexico. In response to the USCG and MARAD request for comments on resources and issues to be addressed in the EIS for this proposed action, NOAA Fisheries offers the following recommendations.

EFH ASSESSMENT

Based on our review of the NOI, the Gulf Landing Deepwater Port application, and our knowledge of the project area, we have developed the following list of species and life stages for which Essential Fish Habitat (EFH) has been designated in the project area:

Managed Species	Life Stages
brown shrimp	eggs, larvae, adults
white shrimp	eggs, larvae, adults
red drum	eggs, larvae, adults
red snapper	all life stages
vermilion snapper	juvenile
lane snapper	juveniles, adults

Managed Species	Life Stages
greater amberjack	juveniles, adults
lesser amberjack	juveniles, adults
gray triggerfish	all life stages
king mackerel	juveniles, adults
Spanish mackerel	all life stages
cobia	all life stages
dolphin	all life stages
bluefish	juveniles, adults
little tunny	juveniles, adults
Atlantic bluefin tuna	eggs, larvae, spawning adults
bonnethead shark	juveniles, adults
Atlantic sharpnose shark	juveniles

Categories of EFH in the project area include unconsolidated marine water bottoms, natural structural features (e.g., hardbottom and shoal areas), and marine water column. Detailed information on EFH for federally managed shrimp, red drum, reef fish, and coastal migratory pelagic species is provided in the 1998 generic amendment of the Fishery Management Plans (FMPs) for the Gulf of Mexico prepared by the Gulf of Mexico Fishery Management Council. Information on EFH for highly migratory species (HMS) is contained in the Atlantic Billfish and Atlantic Tunas, Swordfish, and Sharks FMPs prepared by the Secretary of Commerce. The generic amendment and HMS FMPs were prepared as required by the Magnuson-Stevens Fishery Conservation and Management Act (P.L. 104-297).

To fully address EFH and dependent fisheries of the project area, we recommend the EIS include sections titled "Essential Fish Habitat" and "Marine Fishery Resources" that describe the potential impacts of the proposed project on each category of EFH (e.g., non-vegetated water bottoms, geologic features, continental shelf features, marine water column, etc.) and marine fishery species within the project area. These sections should analyze the potential impacts of the proposed project on federally managed species and life stages which utilize these categories of EFH, and fully evaluate alternative measures to avoid, minimize, and offset adverse impacts to EFH and marine fishery species of the Gulf of Mexico. This descriptive and analytical information, coupled with a statement of the agency's conclusions regarding the effects of the action on EFH and marine fishery species, would provide the basic details necessary for an EFH assessment pursuant to the requirements of 50 CFR 600.920(e).

IMPINGEMENT AND ENTRAINMENT

The EIS should evaluate the impacts to marine fisheries associated with construction, operation, and decommissioning of the proposed Gulf Landing LNG terminal. Impingement and entrainment of marine organisms are a major concern for facilities that utilize large quantities of seawater and should be addressed in the EIS for the proposed Gulf Landing terminal. Entrainment refers to both primary entrainment of organisms into the regasification system, as well as secondary entrainment of organisms into the discharge plume. Natural mortality of fish eggs and larvae is quite high, and stock success can hinge on the survival and transport of relatively few recruits to their estuarine nursery habitats. NOAA Fisheries considers mortality caused by the proposed LNG facility as a significant additional mortality factor to the natural conditions that affect the sustainability of marine fisheries. If it is found that the proposed LNG facility kills the few recruits otherwise destined for survival, the facility would have a dramatic negative effect on economically important fish stocks. Information which is necessary to complete a traditional stock assessment to determine impacts from impingement and entrainment includes:

a) Numbers of eggs, larvae, and juveniles that are expected to be entrained or impinged (and killed) by species.

b) Daily natural mortality estimates by life stage during the first year of life by species, including hatching success. This allows an estimation of survival from viable egg to age of entrainment.

c) Age-structured population model estimates of recruits to age-1 and population fecundity. This allows stock-level estimates of egg production (viable eggs) and overall survival from viable egg to recruitment at age-1.

In addition to direct fish and crustacean impacts, all zooplankton passing through the proposed LNG facility are likely to be killed. Zooplankton are microscopic drifting animals that are important components of the marine food web, consuming phytoplankton and smaller zooplankton and providing food for higher level predators, such as larvae of fish and crustaceans. Estimates of average annual densities of larger zooplankton (mostly copepods) in coastal waters off Texas and Louisiana are that two thousand organisms could occur per cubic meter of seawater. Therefore, the EIS also should provide information on zooplankton mortality from the proposed LNG facility and evaluate the effects on higher level consumers (i.e., impacts to the marine food web).

ALTERNATIVES ANALYSIS

The EIS should evaluate a full range of facility design alternatives, with emphasis on the utilization of a closed loop regasification system, for the Gulf Landing LNG terminal that would avoid and minimize impacts to eggs, larvae, and juveniles of marine fishery species and zooplankton from impingement and entrainment. Alternative designs for the LNG terminal should be evaluated in relation to the vertical distribution of eggs, larvae, and juveniles of marine fishery species in the water column. The analysis of the design alternatives should include quantification

of impacts to marine fishery populations versus other potential impacts (e.g., economic, safety, and air quality impacts). Clear rationale and supporting information including fishery economic considerations should be provided for the selection or elimination of design alternatives.

BENTHIC IMPACTS

Construction of the Gravity-Based Structures (GBS) used to offload and regasify the LNG will impact more than 11 acres of seafloor. Because the proposed Gulf Landing LNG terminal may act as an artificial reef (thereby increasing fish density and abundance at the project site), impingement and entrainment of marine fishery species into an open loop regasification system may increase in magnitude and out of proportion with observed density and abundance of fish populations in the surrounding area. Decommissioning activities involving explosive removal of structures (particularly the GBS) will have further adverse impacts to EFH and marine fishery resources. These factors and methods to avoid, minimize, and mitigate associated adverse impacts to EFH and marine fishery resources should be evaluated fully in the EIS.

DISCHARGE IMPACTS

The effects of thermal discharge on marine fishery species also should be addressed in the EIS. Seawater discharged during the regasification process will be approximately 20 degrees Fahrenheit cooler than ambient seawater. Eggs, larvae, and juveniles of various marine species may be particularly vulnerable to rapid and/or extreme temperature changes. In addition, sodium hypochlorite (NaOCl) will be added to seawater in the regasification process to prevent biofouling. The biological consequences of temperature change and biocide contamination on marine fishery species should be quantified in the EIS and minimized to the maximum extent practicable. Sole utilization of a closed loop regasification system, which would eliminate impacts to marine fishery species from temperature change and biocide contamination of the thermal discharge, should be evaluated in the document.

MONITORING NEEDS

As a result of our concerns that facility operation could significantly impact resources for which we have a trust responsibility, NOAA Fisheries recommends that the EIS include discussion of a fishery monitoring plan. The plan should be designed to document the distribution and abundance of marine fishery species at the project site (by species and life stage) and quantify the impacts to those species and the fishery from impingement, entrainment, and properties (e.g., temperature, salinity, and biocide concentration) of the discharge plume. The completed monitoring plan should be linked to a plan for adaptive management of the LNG facility to allow operational or mechanical modifications to minimize adverse fishery impacts.

CUMULATIVE IMPACT ASSESSMENT

There is increasing potential for cumulative impacts to EFH and marine fishery species from construction and operation of the proposed terminal, in concert with other ongoing and reasonably foreseeable activities in the Gulf of Mexico. There are multiple LNG projects being proposed or planned in the central and western Gulf of Mexico. Additional impacts to NOAA-trust resources may result from (but are not limited to) oil and gas activities, commercial and recreational development, and major transportation projects. As an example of potential

cumulative impacts, the Environmental Protection Agency (EPA) conducted several case study analyses of the impact of cooling water intakes for power plants on fisheries as part of their proposed Section 316(b) Phase II Existing Facilities rulemaking process. In their study of Tampa Bay, EPA found that the economic impacts of entrainment and impingement from only four electric generating stations exceeded $20 million annually in year 2000 dollars. MARAD and USCG should undertake a detailed discussion and quantification of the potential cumulative economic and environmental impacts to EFH and marine fishery species from the proposed terminal and other ongoing and reasonably foreseeable activities in the Gulf of Mexico.

CLEAN WATER ACT SECTION 316 IMPLICATIONS

EPA is considering revising the Clean Water Act Section 316(b) regulations concerning entrainment and impingement impacts from once-through water systems. Although EPA has not made a decision whether LNG facilities will be covered under the proposed Phase III Regulations, we believe that MARAD and USCG should hold new LNG facilities to the same standards as new power plants, since the impacts on fisheries from the once-through seawater systems with similar intake volumes would be the same. Therefore, we believe that the Tract I standards set in section 125.84 (b)(1) of the Section 316(b) Phase I Regulations for new electric generation facilities that withdraw greater than 10 million gallons per day should be the required standard for this LNG facility. The cited standard requires that intake flows, at a minimum, be reduced to a level commensurate with that which can be attained by a closed cycle cooling water system.

ENDANGERED SPECIES ACT CONSULTATION

Finally, the project area may be within the known distribution limits of federally listed threatened species that are under the purview of NOAA Fisheries. In accordance with the Endangered Species Act of 1973, as amended, it is the responsibility of MARAD and USCG to identify actions that may affect endangered or threatened species or may destroy or adversely modify their designated critical habitat. Determinations involving species under NOAA Fisheries' jurisdiction should be reported to our Protected Resources Division (PRD) at the letterhead address. If it is determined that the activities may adversely affect any species listed as endangered or threatened and under PRD purview, then formal consultation must be initiated.

NOAA Fisheries appreciates the opportunity to provide you with preliminary information regarding resources and issues of concern for the proposed Gulf Landing LNG terminal. We look forward to reviewing the draft EIS. If you have any questions regarding our comments, please contact Kelly Shotts at (225) 389-0508. For information concerning threatened and endangered species please contact Mr. David Bernhart of our PRD at (727) 570-5312.

Sincerely,

Rickey N. Ruebsamen

for

Miles M. Croom
Assistant Regional Administrator
Habitat Conservation Division